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INTRODUCTION

One of the Statutory tasks of the International Peace Research Association is "the publication of scientific studies of an interdisciplinary character and the proceedings of IPRA conferences" (article 4 sub c). In this connection the Executive Committee decided to publish the "IPRA Studies in Peace Research".

First of all the proceedings of IPRA General and Special Conferences will appear in this series. Also the proceedings of peace research conferences sponsored by IPRA may find a place there.

Next to that the IPRA Studies in Peace Research will contain studies in peace research undertaken or sponsored by IPRA, as well as other studies in peace research which IPRA considers worth publishing.

The Executive Committee is happy to open the Series with the "Proceedings of the IPRA Inaugural Conference". They contain the Report of the Conference which took place July 3-5, 1965, at Groningen (Netherlands), and the papers read and discussed at this conference. It is expected that the Proceedings of this and future General Conferences will give a clear picture of the various ways peace research is conducted in the different parts of the world, and that they will contribute to a world-wide scholarly approach to the problems of peace and war.

INTERNATIONAL DEVELOPMENT AND INTERNATIONAL FEUDALISM:
THE LATIN AMERICAN CASE*

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1. Introduction

In this paper we intend to examine some characteristics of the pattern of interaction among Latin American countries, showing how these interactions follow a feudal type pattern, which constitutes an obstacle to co-operation and development. Because we consider this an obstacle to the development of peace, it is necessary to justify the importance we give to co-operation today, mainly among the underdeveloped countries.

2. Co-operation, Development and Peace

It is very often taken for granted that co-operation is an important factor for peace, since co-operation means exactly the opposite of hostility and war. But co-operation implies contact, and interaction is also a necessary factor for the rise of conflicts. For this reason we might suggest that one condition for peace would be the reduction of contact, because this would also reduce the possibilities of conflict.

Just as with co-operation, development in itself is not a sufficient condition for peace. Indeed, empirical evidence¹ tends to show that belligerence is correlated with development, both in the sense that development increases the capacity to kill of the countries and in the sense that the most developed

* This is a revised version of the paper presented at the First General Conference, International Peace Research Association, Groningen, Netherlands July 3-5, 1965, published here as PRIO-publication no. 21-2 from the International Peace Research Institute, Oslo. A more extended and complete version of the data presented here also appears in Johan Galtung, Manuel Mora y Simon Schwartzman, "El sistema latinoamericano de naciones: Un análisis estructural", *América Latina* no. 1 1966. In the present article the emphasis is not so much on the structure as on the implications for development problems.

¹ Tom Broch at the Peace Research Institute - Oslo has done some research on Quincy Wright's data on primitive societies showing that 1. the more "civilized" or less primitive the society, the more aggressive or war-like it is and 2. the more it interacts with other societies, the more aggressive or war-like does it tend to become. The research will be published in *Journal of Peace Research*, no. 1, 1966.

nations will tend to enlarge their space of economical and political influence, very often in a violent way.

But in the contemporary world, co-operation, development and peace are strongly connected. We know that the factors of international instability are concentrated today mainly in the underdeveloped areas which suffer a more or less violent process of change towards higher and better forms of life. This process is carried on by the population continuously questioning the internal *status quo* in these countries, and their governments questioning the international *status quo* when they are affected in one way or another by the pressure they are exposed to. Because the rising level of aspirations among the population in the underdeveloped countries is a factor which it is impossible to control (apart from the circumstance that the control of this factor is, morally speaking, undesirable), the problem of peace is strongly connected with the problem of economic development. And just as development cannot be achieved without peace, it is unthinkable that a stable peace can be based on the maintenance of the present *status quo*.

The problem of economic development is then an international one both in its potentialities for escalation of conflicts and in the difficulties the underdeveloped countries have in reaching the high levels of life in the short run. This is a problem that demands solutions from both sides, the developed and underdeveloped countries.

Regarding the former, a specific political approach would be to weaken the possibilities of the escalation of conflicts in the underdeveloped areas into a world conflagration. Many kinds of solutions have been proposed regarding this, and apparently an effective way in the short run would be the establishment of a system of "remote deterrence" and a reduction in the bipolarity of the international power system, in such a way that political oscillations in the unstable areas could be seen as natural and expected phenomena which will not transcend their local dimensions². Besides, it is necessary to increase technical assistance and economic aid to the underdeveloped countries and this will be effective only if this assistance is really meaningful both quantitatively and qualitatively, and not orientated towards the consolidation of the local *status quo* in the interests of bloc politics.

To achieve this double end - the elimination of the tight bipolarity and effective technical assistance - is a task mainly for the developed countries,

² Cf. Amitai Etzioni, *Winning Without War*, Doubleday & Co, Inc. 1964.

and its solution depends among other things on whether or not these countries see a future in a policy based on a strict international polarization. But it depends also on the behaviour of the underdeveloped countries and an essential element of this behaviour is contact and co-operation.

First of all, the underdeveloped countries cannot wait indefinitely for the big countries to decide to change their international policies. The problems that these countries are living with are urgent, and the pressures towards social change do not have the gift of patience. While each country tries to solve these problems by itself, it is almost unavoidable that its internal difficulties are transformed into an episode of the "cold" or the "hot" war. A Western-orientated government will try to be tied to the big powers of its bloc seeking support from them, for defending itself against internal pressures. And the Western powers will have to help a friendly government regardless of whether the internal opposition to this government is of a Communist type or not, and whether this government is likely to use support received effectively for development or not. This is a logical consequence of the tight bipolar system, and will exist as long as the decisions about foreign aid are dependent on the logic of the cold war.

Conversely, the opposition to this government will have to look for support in the opposite bloc. The examples of the alignment of the Cuban revolution, the unavoidable radicalization and consequent overthrow of the former Brazilian government, the recent events in the Dominican Republic, among many others demonstrate how this system works. The dominant aspects of all these events was that it was impossible to establish or to sustain a non-aligned progressive government. A government which has arisen from opposition to the *status quo*, if isolated, will not be able to stay in power without a definition of its position vis-à-vis the blocs, and when this definition is made the new *status quo* will be maintained by international support regardless of whether there is correspondance between the ideological statements and reality. And this will continue until a new crisis arises, very probably with international repercussions.

The impossibility of autonomous action by the underdeveloped countries leads among other things to a narrow view in the political groups in each country regarding their possibilities of action. As long as each underdeveloped country interacts almost exclusively, in a positive or negative way, with the big powers, without interaction at its own level, it will be impossible to visualize other policies than that of asking help and of tying themselves both

politically and ideologically to one bloc or another. Instead of trying to solve their problems by themselves, they will try to bring the solutions from outside. Politics will be abstract and demagogic, always in absolutist terms, and this explains why we can find that someone who is "pro-Western" or Communist in the underdeveloped countries will be much more pro-"Western" or Communist than the Western or Communist powers themselves.

Besides being a consequence of isolationism this type of politics is connected with the impossibility for a small underdeveloped country to reach by itself a high level of economic development and to play a meaningful and influential role in the international system of power. It is a commonplace statement that the underdeveloped countries cannot try to follow step by step the way followed by the developed countries in their growth, and that they must start immediately with the higher levels of modern technology. But this again is inconsistent with their small size, their lack of capital and their scientific underdevelopment, and only more intense contacts, between the underdeveloped countries as the first step towards co-operation, will make it possible to change this situation.

3. The international Feudal System

The general lack of communication between the underdeveloped countries indicates that the explanation must lie not so much in the specific characteristics of any single country A or B, but rather in a more general level of facts in which all singular countries participate. This consideration leads us to look at the international scene as a *system* of countries, in which the behavior of each unit is neither at random nor exclusively dependent on the idiosyncratic characteristics of the nations, but is constrained by the logic of the system itself.

These considerations, among others, underlie the study of the international system of nations as a stratified system². We shall now present some of its theoretical framework and some first results regarding the particular system of the Latin American countries.

We start with the simple idea that an international system, as well as the national system, can be seen as a stratified one, and that interactions among

² A pioneer study in this perspective is Gustavo Lagos, *International Stratification and Underdeveloped Countries*, The University of North Carolina Press, 1963.

the actors will depend in their intensity and other characteristics on the position which the actors have in this stratification. To talk meaningfully of a stratified system we must regard as necessary conditions:

1. the existence of rank dimensions that order the countries from a low to a high position,
2. the existence of a relative consensus that the several countries actually belong to the same system.

These two conditions are interdependent. Rank dimensions are defined for a specific system and it is the existence of this system and a common evaluative frame that give a variable the characteristics of a rank dimension. The use of the general expression "Latin American Countries", the characterization of these countries as "underdeveloped" (implying the existence of the common value of "development"), the simple existence of international organizations of a regional character, all this justifies the idea of a Latin American system, and the study of it.

Our general hypothesis is that the Latin American system has the characteristics of a feudal system. "Feudal system" is a much over-used expression, but we will try to give a well-defined meaning to it⁴. We define a "feudal system" as a system of units with two properties:

1. rank concordance
2. interaction in a pair strongly dependent on total rank of the pair

We call "rank concordance" the extent to which all m units are ranked in the same way on the n dimensions for which this system is defined. A hypothesis that follows from this definition is that the higher the rank concordance, the higher the probability of the emergence of generalized rank-roles.

Concordance means that there are several dimensions and that not only do the units find themselves at the same relative distance on these dimensions but any single individual also finds himself in the same position on each dimension. The implication of this is that all structural conditions are present for training the unit in roles specific for its total rank (high, middle or low "class"). Actually, under these conditions the passage from one kind of inter-

⁴ For a full development of this concept and its implications, cf. Galtung, Johan: *Theory of Feudal Systems*, forthcoming.

action to another will never imply a change of rank, and a unit of high class will always deal with a unit of the low class as such, and conversely, and there will be no situation in which the ranks can be changed, and the roles modified accordingly.

Thus the degree of feudalism in a system can be measured by two characteristics: the amount of rank concordance present, and the degree of dependence of the amount of interaction on the total rank of the pair. The perfectly feudal system is a system completely divided into classes, one upper class and one lower class (or into three classes, including a middle class if that status is present). At the other extreme will be a completely de-feudalized system which will show a maximum of rank discordance and no dependence at all of interaction on the total rank of a pair.

The main consequence of the existence of feudalism is that it is a self-sustaining system, in the sense that each of these characteristics is self-supporting and that they also support each other.

Regarding the first point, if a unit has already three high class statuses and is used to associate with a unit that has three low class statuses, then both of them will learn roles that they will easily generalize. For the high class unit this means an asset, a resource that it may use to conquer other high class statuses; for the low class unit this means a kind of inhibition, a general pattern of behaviour that will not only prevent him from conquering high class statuses but also make him more likely to accept more low class statuses.

Regarding the second point, it is an established fact that groups tend to stratify, even in laboratory experiments, and that interactions are more intense between the members of the high stratum, less between the members of the high and the low and even less intense between the members of the low strata. This situation tends to be reinforced since, once established, the interactions will be more gratifying in all respects at the points of the social structure where there are already many interactions.

These two self-sustained systems are mutually reinforcing. Rank is a kind of resource, and rank concordance means a heavy concentration of resources among the people who are high on all dimensions and a similar deprivation of resources for the units that are low on all dimensions. And because interaction means in general, exchange of goods, they will concentrate in the higher ranks, which again will reinforce the high rank they already have.

If our hypothesis is confirmed it will mean that the differences among the

countries will tend to increase, not to decrease; that the difficulties of integration or co-operation among the countries will be bigger the lower the position of the country in the system, i.e. the more the unit needs integration and co-operation. The consequence of such a system is that left to itself it tends to perpetuate itself or to grow worse unless some external factor intervenes, intensely or not.

In order to test our hypothesis it will be necessary first, to see if there is stratification in the system and secondly, to study the patterns of interactions in the system.

4. International Stratification in Latin America

The total rank of a country in a stratified system is the sum of its positions in a set of rank dimensions. In a system with strong rank concordance, however, the total rank will not only be this, but it will have a sociological reality that can be grasped directly, because one of the characteristics of this type of system is the existence of generalized rank-roles. This means that one can measure the rank of a given country either by an *objective* method, verifying the position of the country in a set of rank dimensions considered relevant, or by a *subjective* method, trying to see if there is an image of a total generalized rank in the mind of the members of the country or the countries of the system. We shall use both methods in the following.

The objective method consists essentially of the construction of an index of *international position* which results from adding the positions that the countries occupy on a set of dimensions. Here we shall consider the *size* of the countries, using global variables; the *distribution of goods* by analytical variables corresponding to a dimension of relative wealth; and some characteristics of the *social structure*. Each of these dimensions is represented by three indicators. In addition to this we included an indicator of *race*, a rank dimension of sociological relevance. We then had a total of 10 rank dimensions. The countries were ordered from 1 to 20 on each of the dimensions and then divided in three groups of equal size, to which were attributed values 2, 1 and 0. Thus, the final index varies from 0 to 20 (tables 1 and 2).

How well does the index satisfy the conditions of rank concordance and the idea of a generalized rank role?

Regarding the first point, examination of the matrix of intercorrelations among the items of the index shows the existence of two well characterized

TABLE 1. *Index of International Positions*

Dimension	Item	Source
a. Size	1. Area	UN, <i>Statistical Yearbook</i> , 1963
	2. Population	UN, <i>ibid.</i>
	3. Gross National Product	B.M. Russett et al.: <i>World Handbook of Political and Social Indicators</i> Yale University Press, 1964.
b. Distribution of goods	4. Gross National Product per capita	DESAL, "Tipología Socio-Económica Latinoamericana", <i>Mensaje</i> , Oct. 1963, Santiago, Chile.
	5. Illiteracy	DESAL, <i>op. cit.</i>
	6. Communications (newspapers/inhabitants)	DESAL, <i>op. cit.</i>
c. Social Structure	7. % of population in middle and high strata	DESAL, <i>op. cit.</i>
	8. Urbanization (pop. in cities of more than 20,000 inh.)	DESAL, <i>op. cit.</i>
	9. % of active pop. in industry	DESAL, <i>op. cit.</i>
d. Race	10. % of population white	Angel Rozemblat, <i>La Población Indígena en América</i> , United Nations Demographic Yearbook, 1956.

TABLE 2. *Index of International Position, Rank of the Countries.*

Country	Score	Rank Position	Country	Score	Rank Position
Argentina	20	1	Panama	9	11
Chile	18	2,5	Ecuador	8	12
Cuba	18	2,5	Bolivia	6	13,5
Venezuela	17	4	Paraguay	6	13,5
Brazil	16	3,5	Dominican Republic	5	15
Uruguay	16	3,5	El Salvador	4	16
Colombia	15	7	Guatemala	2	17,5
Mexico	14	8	Nicaragua	2	17,5
Costa Rica	11	9,5	Haiti	1	19,5
Peru	11	9,5	Honduras	1	19,5

clusters, one corresponding to a development dimension, the other to a size dimension, both with strong internal intercorrelations and low external correlations.⁶ Apparently, the condition of rank concordance is not satisfied, even if it exists for each of these two dimensions.

TABLE 3. *Index of International Position, Clusters*

	average correlations	
	with cluster 1	with cluster 2
<i>Cluster 1: Size</i>		
1. Size	.935	.12
2. Population	.95	.12
3. Gross National Product	.945	.29
<i>Cluster 2: Wealth</i>		
4. GNP per capita	.17	.43
5. Illiteracy	.11	.78
6. Newspapers per inhabitants	.12	.74
7. High and middle sectors per inhabitants	.24	.92
8. Urbanization	.22	.75
9. Pop. in industry in % of active population	.16	.58
10. % population white	.22	.60

To validate our index, and in order to verify how well it corresponds to an existing social image of a stratified system – or in other words, of a generalized rank perception – a questionnaire was given to the students of the Latin American Faculty of Social Sciences (FLACSO) in Santiago de Chile,

⁶ The differences of the countries in the two clusters pose questions of the consequences of rank disequilibrium for a given country, of rank incongruity for a given pair of countries, etc. A first general theoretical study in this perspective is Johan Galtung's "Rank and Social Integration – A Multidimensional Approach" in Berger, Zelditch and Anderson: *Sociological Theories in Progress*, Boston, Houghton Mifflin Co., 1965. For studies on the effect of rank disequilibria at regional and international level, cf. Peter Heintz, *Modelo de Investigación sobre Política Provincial*, FLACSO, Santiago de Chile, 1964 (mimeographed) and especially *Los Países Latinoamericanos: un análisis contextual*, ibid., 1965 (mimeographed). In this article the author studies systematically the consequences of disequilibria on dimensions such as education, urbanization, level of life and population, in the Latin American countries.

as well as to undergraduate and graduate students of social science from several Latin American countries, applicants for the 1966-7 course at FLACSO during an interview for selection. This gave us a total of 65 respondents.⁷ Among other questions, the students were asked to distribute the Latin American countries in three classes, high, middle and low, according to the prestige or importance which they thought the countries have in the Latin American system. The results as well as a measure of dispersion, are presented in Table 4. For the purposes of the analysis values 3, 2 and 1 were given to the three classes respectively, and the median was calculated for each country, varying, then, from 1 to 3.

TABLE 4. "Subjective" Index of International Position

Country	Score	Rank Position	Modal category	Frequency of the modal category
Argentina	2.98	1	3	98%
Brazil	2.89	2	3	90%
Mexico	2.81	3	3	85%
Chile	2.64	4	3	66%
Venezuela	2.32	5	2	52%
Uruguay	2.20	6	2	46%
Cuba	2.01	7	2	55%
Colombia	1.87	8	2	74%
Peru	1.80	9	2	64%
Costa Rica	1.50	10	1	56%
Bolivia	1.30	11.5	1	71%
Ecuador	1.30	11.5	1	71%
Panama	1.22	13	1	79%
Paraguay	1.20	14	1	81%
Nicaragua	1.14	15	1	87%
Guatemala	1.12	16	1	88%
El Salvador	1.10	17	1	89%
Dominican Republic	1.09	18	1	92%
Honduras	1.07	19	1	95%
Haiti	1.03	20	1	96%

⁷ These data are only part of a more general multinational study on the perception of international stratification in Latin America, now in progress.

The comparison between Tables 2 and 4 indicates that our objective index reconstructs quite well the image emerging from the interviews. Actually, the rank-correlation coefficient between the two measures is as high as .93. The examination of the principal deviant cases (Mexico, Cuba, Brazil) shows the importance of the factor of "size", that can also be taken as a dimension of power, and seems to indicate that more important than the distribution of goods (according to which Brazil and Mexico would be low and Cuba high) is the existence of modernized sectors in the countries, which is also a characteristic of development. If this is so, our condition of rank concordance is fulfilled.

The examination of the measure of dispersion presented in Table 4 shows a high consensus about the existence of a high class, consisting of the big and developed countries (Argentina, Brazil, Mexico), and of a low class consisting of the small and underdeveloped countries. Colombia, a country of middle size and development, is a typical case of the middle class, whereas the consensus is lower regarding small and developed countries like Chile and Uruguay, or Cuba because of its special political situation.

We arrive at the conclusion that there exists a stratified system with a strong rank concordance in the Latin American continent. In line with the discussion above, and because it corresponds better to an intuitive image, we shall in the following use the subjective index as a measure of stratification. It is necessary now to see whether the second condition of a feudal system also exists, or in other words, whether interactions among the countries depend on the position they have in the system of stratification.

5. Patterns of Interaction

The study of the patterns of interaction demands the introduction of relational variables according to which the units of analysis will no longer be countries, but *pairs* of countries.⁷ If we have 20 countries, this will give us a total

⁷ This means working with the universe of pairs and there is no necessity for significance tests. The situation would be different however, if we dealt with a larger number of countries. The Dimensionality of Nations Project now in progress in Yale University under the direction of Professor R.J. Rummel works with a universe of 82 countries, which demands the selection of a sample among the 3,321 possible pairs. Cf. J.R. Rummel, *The Dimensionality of Nations Project*, November 1964; *Dyadic Relations Random Sample*, July 1964; *Dyadic Study - First Revised Variable List*, January 1965, etc. These are some of the preliminary

of 190 pairs and these will be our new units of analysis. The dimensions we use to analyse these pairs are the following:⁸

(a) *Rank of the pair.* Assume a system of three ranks, high, middle and low. If we give them a differential score, 2, 1, 0, the *total rank* of the pairs will vary from 0 to 4. In order to construct this measure of total rank the countries were divided according to the subjective index into three classes homogeneous as regards size - a high class from Argentina to Uruguay, a middle class from Cuba to Paraguay and a low class of all the others. The countries could also have been ordered from 1 to 20 (Haiti to Argentina), by giving values according to the rank position, adding these values for each pair, and dividing the sets of pairs into three according to the distribution. The result is more or less like the former, with the difference that the final trichotomization allows us to work with a smaller and more homogeneous number of categories. It is possible, also, to calculate the *rank difference*, using the same kind of thinking but subtracting instead of adding the rank values.

(b) *Geographical Proximity.* The factor "geographical proximity" can be a strong determinant of the international structure of interactions. It is necessary to stress that the fact that variations in the patterns of interaction can be based on geographical proximity does not say anything about the functional relevance of this fact. It is one thing to ask why a phenomenon exists; another and no less important thing is to ask what consequences it has. We may assume that such an ascriptive characteristic as geographical position (like "area" and others) has a reinforcing effect on the feudal structure of interactions, which can, again, reinforce the importance of this "purely" geographical factor. The new media of communications make the geographical factor lose its importance gradually and distances will be measured much more in terms of social distance than in terms of miles or kilometers. Caracas or Rio de Janeiro are much closer to Paris or New York than to La Paz, to judge by the means of communications as well as by almost any other kinds of contact, and it is not meaningless to say that the

drafts, mimeographed, of the DON project. We are indebted to Professor Rummel for making this material available to us.

⁸ In the following we will present only the main tables. The others can be found in "El Sistema Latinoamericano de Naciones - un análisis Estructural".

route from one Latin American capital to another goes by the way of the United States or Europe.⁹

To control this factor it will be necessary to use a measure that takes distance into account as well as the existence of natural obstacles, the existence of densely populated regions, etc. We made the most simple index possible and our 190 pairs of countries were ordered according to:

- (i) Whether they have common boundaries or not
- (ii) Whether, if they do not have common boundaries, they both have boundaries to at least one third country common to both.

(c) *Surface communications.* To establish the network of surface communications we marked on a map of the region which pairs of countries have railroads or roads of constant transit running from one to the other. Using a similar procedure to the one used in connection with geographical proximity, the pairs of countries were ordered according to:

- (i) Whether or not they have at least one road or railroad across the border from one to the other
- (ii) Whether, if they do not have direct surface communication, they have it with at least one common country.

(d) *Air communications.* The network of air communications was established according to the *ABC World Airways Guide* (edition of November 1964). A flight between two countries was defined as an air connection if at least one of the capitals was involved either as an intermediate point or at the end of line. Cases which the guide considered to be a direct flight, have been included even if there is a change of planes en route. For the purposes of this study, the following cities were considered equivalent to capitals: São Paulo and Rio de Janeiro (Brazil), Medellín and Barranquilla (Colombia), Guayaquil (Ecuador) and La Paz (Bolivia), because of the importance of these as alternative terminal points to the respective capitals. When a plane cannot take passengers between two towns because of some special regulation, this connection was not counted as a flight.

⁹ Fred P. Ellison in "The writer" (in J. J. Johnson, *Continuity and Change in Latin America*, Stanford University Press, 1964, p. 70) notes that "Latin American writers know each other's work less well than one might think, and there is truth in the quip that the concept of Latin America exists only in the United States, where the 'Latin American Studies' are pursued".

We used as units the number of weekly flights, the frequency, and the figures are showed in tables 5 and 6.

TABLE 5. *International Flights in Latin America* (number of weekly flights)

Country	USA	Europe	flights with		subtotal	Lat. America	Total
			Africa	Asia			
Argentina	26	18	12	2	58	251	309
Brazil	31	22	12	0	65	88	153
Mexico	27	11	0	2	40	92	132
Chile	13	14	7	2	36	81	117
Venezuela	15	15	0	0	30	40	70
Uruguay	12	8	5	0	25	157	182
Cuba	-	6	0	0	6	4	10
Colombia	18	6	0	0	24	56	80
Peru	38	11	0	2	51	119	170
Costa Rica	7	0	0	0	7	63	70
Bolivia	6	0	0	0	6	22	28
Ecuador	13	4	0	0	17	54	71
Panama	39	1	0	0	40	161	201
Paraguay	4	2	1	0	7	39	46
Nicaragua	6	0	0	0	6	51	57
Guatemala	8	0	0	0	8	80	88
El Salvador	7	0	0	0	7	86	93
Dominican Republic	13	1	0	0	14	15	29
Honduras	7	0	0	0	7	48	55
Haiti	7	0	0	0	7	7	14
Total	299	119	37	8	463	1514	1977

(e) *Trade.* Trade is surely one of the most important variables of interaction, and it has been recognized as such in the literature.¹⁰ The amount of trade

¹⁰ For instance, L. F. Richardson, *Arms and Insecurity*, (London: Stevens and Sons Ltd., 1960), considers trade as the most important factor for co-operation. In a quite different context, a factor analysis carried out by R. J. Rummel, (Dimensionality of Nations Project, *Some Dimensions of International Relations in the Mid-1950's*, August 1964, mimeographed) shows

TABLE 6. *Latin America, air interactions.¹* (number of weekly flights)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	-	28	4	36	1	132	0	2	17	0	3	5	9	14	0	0	0	0	0	0
2		-	3	7	5	9	0	2	6	0	1	0	13	8	0	3	0	3	0	0
3			-	3	2	0	4	4	7	9	0	2	14	0	4	18	14	0	4	0
4				-	2	3	0	2	15	0	1	2	9	1	0	0	0	0	0	0
5					-	0	0	5	4	0	0	2	11	1	0	2	0	5	0	0
6						-	0	1	1	0	1	0	4	6	0	0	0	0	0	0
7							-	0	0	0	0	0	0	0	0	0	0	0	0	0
8								-	16	0	1	8	14	1	0	0	0	0	0	0
9									-	0	8	18	24	3	0	0	0	0	0	0
10										-	0	0	16	0	9	9	13	0	7	0
11											-	3	3	1	0	0	0	0	0	0
12												-	12	2	0	0	0	0	0	0
13													-	2	5	11	9	0	5	0
14														-	0	0	0	1	0	0
15															-	8	15	0	10	0
16																-	21	0	8	0
17																	-	0	14	0
18																		-	0	7
19																			-	0
20																				-

¹ The numbers correspond to the order of countries in table 5.

the existence of a general factor of co-operation, in which the variable trade has the higher loading, of 0.95.

More specifically, studies undertaken by the United Nations Commission for Latin America (ECLA) have stressed the asymmetry in the trade relationships between the developed and underdeveloped countries in such a way that the international prices of the raw material produced by the former tend to go down, while the prices of the industrialized products tend to go up. Some calculations show that what the underdeveloped countries are losing by the worsening of the terms of trade is much more than what they are receiving as economic aid. This thesis was very strongly supported in the recent United Nations Conference on Trade and Development (UNCTAD), Geneva (1964), where many countries of the underdeveloped area stressed that fairer terms of trade are far more important and helpful than economic aid. For a general overview of ECLA's thesis, cf. Hirschman, Albert O, "Ideologies of Economic Development in Latin America", in Hirschman, A. O. (ed), *Latin American Issues* (New York: The Twentieth Century Fund; 1961). Cf. also Raul Prebisch (former ECLA's director and secretary general of the UNCTAD), "Commercial Policy in the Underdeveloped Countries", *American Economic Review*, vol. 49, May 1959, and many ECLA publications.

TABLE 7. *External Trade (1961)¹ Latin America*

- (a) Grand Total (exports plus imports)
 (b) Total of external trade with Latin American countries
 (c) Total trade with USA
 (d) b/a (%)
 (e) c/a (%)

Country	(Millions of dollars)				
	a	b	c	d	e
Argentina	2,587.0	245.7	511.3	9.6	19.6
Brazil	2,865.2	240.2	1,077.6	8.4	37.0
Mexico	1,846.2	38.6	1,299.9	2.1	70.4
Chile	1,092.4	85.5	410.8	8.0	36.7
Venezuela	3,363.4	254.9	1,481.2	7.7	44.0 ²
Uruguay ³	-	-	-	-	-
Cuba ³	-	-	-	-	-
Colombia	974.1	34.3	538.8	3.5	55.3
Peru	965.4	69.3	385.3	7.2	40.0
Costa Rica	81.1	14.4	47.3	17.7	58.0
Bolivia	153.8	23.1	57.4	15.0	37.3
Ecuador	197.3	20.9	107.2	12.0	54.0
Panama	144.8	49.5	84.2	34.1	61.0
Paraguay ³	61.2	21.1	12.5	34.4	20.4
Nicaragua	142.9	11.8	68.7	8.2	48.0
Guatemala	377.6	27.3	152.7	7.2	40.5
El Salvador	227.6	33.3	82.8	14.6	36.3
Dominican Rep.	226.8	2.1	128.1	2.0	56.7
Honduras	140.1	20.8	80.6	14.8	57.5
Haiti ³	-	-	-	-	-

¹ For the reliability of these data, see footnote no. 12.

² The Direction of International Trade does not give data for these countries.

³ About 20 percent of the total trade of Paraguay is given as 'unclassified', which makes the percentage figures highly doubtful.

between two countries will depend, among other things, on the size of each country (measured in terms of gross national product), on its economic structure, especially its positions in the international division of labour and, we suppose, on the position each has in the international stratification. The construction of a measure of trade interaction was based on the *Statistical*

TABLE 8. Rank of Pairs and Interactions (%) - I

	Total Rank of Pair				
	4	3	2	1	0
<i>Surface communications</i>					
direct	27	12	9	2	33
1 step	13	21	11	4	0
none	60	67	80	94	67
SUM	100	100	100	100	100
(N)	(15)	(48)	(64)	(48)	(15)
<i>Flights</i>					
more than 6 a week	33	23	16	11	46
1 to 6	53	46	22	6	0
none	12	31	62	83	54
SUM	100	100	100	100	100
(N)	(15)	(48)	(64)	(48)	(15)
<i>Relative Trade</i>					
more than 20	50	15	4	0	27
10 to 20	0	3	11	11	18
1 to 10	50	51	37	23	9
none	0	31	48	66	46
SUM	100	100	100	100	100
(N)	(10)	(35)	(46)	(35)	(11)

Papers of the Direction of International Trade, United Nations, 1962. In order to eliminate the influence of the size of the countries, we used the directional trade ratio F_{mn} ¹¹ where

$$F_{mn} = \frac{t_{mn}}{T_m} + \frac{t_{nm}}{T_n}$$

and where t_{mn} is the intertrade between the m th and the n th countries and

¹¹ Cf. Smoker, Paul: "Trade, Defence and the Richardson Theory of Arms Race", *Journal of Peace Research*, 2, 1965, p. 161.

T_m and T_n are the total trade of the m th and n th countries. Trade is taken as the sum of imports and exports, and for that reason t_{mn} equals t_{nm} .¹²

6. The Feudal System

We are now able to ascertain the importance of the second characteristic of a feudal system, namely the dependence of the interactions on the total rank of the pair. Tables 8 and 9 show the existing relationships between

TABLE 9. Rank of Pairs and Interactions (%) - II

	Total Rank of Pair		
	High	Middle	Low
<i>Surface communications</i>			
direct	16	8	11
1 step	9	16	8
none	75	76	82
SUM	100	100	100
(N)	(57)	(67)	(66)
<i>Flights</i>			
more than 6 a week	25	15	21
1 to 6	40	23	12
none	35	60	67
SUM	100	100	100
(N)	(57)	(67)	(66)
<i>Relative Trade</i>			
more than 20	23	5	5
10 to 20	2	13	11
1 to 10	40	54	20
none	35	28	64
SUM	100	100	100
(N)	(43)	(39)	(55)

¹² Because the data of the Direction of International Trade do not always refer to one-year periods, efforts were made to permit comparability. When differences were found in the trade budget of a pair, due perhaps to differences in exchange rates (the exports of A to B differing from the imports of B from A), the average was taken. The data have, then, a wide range of errors, but the differences of magnitude are so large that we may safely assume that the general tendency will not disappear.

rank and interactions for the two criteria used to classify the pairs according to total rank.

The coherence in these Tables is remarkable. The higher the rank of a pair the more the two nations communicate by land or by air, and the greater the relative importance of the trade between the two. The pairs with total rank 0, made up by Nicaragua, El Salvador, Dominican Republic, Honduras, Haiti and Guatemala nevertheless constitute a notable exception to this general rule. All are Central American nations, small and close to each other. An explanation that occurs immediately is that the geographical factor is predominant here. The truth of this can be judged from Table 10.

TABLE 10. *Geographical Proximity and Interactions (%)*

	Geographical Proximity		
	boundaries	"one step"	none
<i>Surface communications</i>			
direct	64	0	0
1 step	18	53	0
none	14	47	100
(N)	(27)	(30)	(130)
<i>Flights</i>			
more than 6 a week	66	23	10
1 to 6	30	64	15
none	4	13	75
(N)	(27)	(30)	(130)
<i>Relative Trade</i>			
more than 20	38	8	5
10 to 20	25	8	5
1 to 10	29	44	34
0 to 1	8	40	56
(N)	(24)	(25)	(88)

The influence of the geographical factor is strongly felt, as was rank in the preceding tables. The closer the countries, the more communications and the more intense the trade between the two countries.

TABLE 11. *Rank Difference and Interaction. (%)*

	Rank Difference		
	0	1	2
<i>Surface Communications</i>			
Direct	24	6	2
1 step	12	13	5
none	64	81	93
(N)	(58)	(96)	(36)
<i>Flights</i>			
more than 6 a week	35	17	5
1 to 6	27	26	17
none	38	57	78
(N)	(58)	(96)	(36)
<i>Relative Trade</i>			
more than 20	21	7	4
10 to 20	12	7	8
1 to 10	29	37	44
none	38	49	44
(N)	(42)	(70)	(25)

That this holds true for surface communication is evident, and does not demand further explanation. With regard to air communications it seems that here we have a kind of air traffic which is extremely local and does not have the possibilities of using modern technology to overcome geographically determined factors. We shall show later how this geographical dependence also is a function of the low rank of the pairs, however.

Regarding trade, it is necessary to pay attention to the meaning of "relative trade" which we are using here. The meaning of F_{mn} is clear when its value is high or low, but is less clear when its value is intermediate. When it is high, it indicates that almost all of the external trade of the pair in the system considered is concentrated in this relation, and the contrary for the low values. But an intermediate value can have two different meanings. On the one hand it may mean that the importance of the trade in the pair is in the middle range for both countries, if they have more or less the same

amount of commerce in the area; but it can also mean that the relationship is strongly asymmetric – very important for one and almost without significance for the other. However we can always say that the index gives an idea of the relative dimension of trade for the pair within the area, even without considering the effect of asymmetry. But we can see, also, that interactions tend to concentrate in the pairs with smaller rank differences. This is based on the general idea that equal rank favours interaction, and especially in a feudal system in which the stratification has a definite sociological meaning. Table 11 shows the relationship between rank equality (or rank difference) and interactions, and the data confirm our ideas.

When we calculate the percentages in Table 9 horizontally we see that 67 percent of the cases where relative trade exceeds 20 occur among the countries of high rank, while pairs of countries of low rank make up 57 percent of the relationships in the bottom group. At the other extreme the same analysis in Table 8 shows that 25 percent of the high relationships (more than 20) belong to the group of total rank 0. The commercial relationships actually seem to be a function of rank or of a geographical dependence that does not allow the small countries to free themselves from local ties.

We now want to look at the relationship between rank and geographical position. It is possible to make an index of geographical integration in the continent, simply by giving value 2 to each direct boundary and value 1 to boundaries with a third country in common, and adding up. The rank correlation between this index and the rank order is almost zero (.07), showing that we have two independent factors. But if rank does not depend on geographical position, it is possible, nevertheless, that the influence of the geographical factor will be determined by rank. The influence of rank on the geographical dimension can be seen in Table 12.

It is clear enough that the geographical factor works at each level of rank. If we had ordered Table 12 differently, to study how the rank factor behaves at each level of geographical proximity, the conclusion would also be that the influence of this factor is constant. How important the geographical factor is at each level of rank can be measured by the range of variation (that is, the difference between the extreme percentages) for each level. Thus, the interpretation of this Table for variables of communication is that the countries of lower rank are much more dependent on geography than those of high rank: the network of air traffic, for instance, is twice (75/39) as dependent on geographical contiguity for the former as for the latter,

TABLE 12. *Rank of the Pair, Geographical Proximity, Interactions (%)*

Geographical Proximity	Rank of the Pair								
	High			Middle			Low		
	Bound.	1 step	none	Bound.	1 step	none	Bound.	1 step	none
<i>Surface communications</i>									
direct	62	0	0	62	0	0	86	0	0
1 step	15	33	0	25	60	0	14	67	0
none	23	67	100	13	40	100	0	33	100
(N)	(13)	(9)	(35)	(8)	(15)	(44)	(7)	(6)	(53)
<i>Flights</i>									
more than 6									
a week	54	22	15	76	20	2	86	34	11
1 to 6	46	67	31	12	67	11	14	50	8
none	0	11	54	12	13	87	0	16	81
(N)	(13)	(9)	(35)	(8)	(15)	(44)	(7)	(6)	(53)
<i>Relative Trade</i>									
more than 10	64	33	6	63	0	12	66	33	7
1 to 10	36	17	47	37	62	55	0	33	21
none	0	50	47	0	38	33	33	33	72
(N)	(11)	(6)	(26)	(8)	(13)	(18)	(6)	(6)	(43)

TABLE 13. *% of the variation explained by the Geographical Factor*

	Rank of the Pair		
	High	Middle	Low
<i>Surface communications</i>			
direct	62%	62%	86%
none	77%	87%	100%
<i>Flights</i>			
more than 6	39%	74%	75%
none	54%	75%	81%
<i>Relative Trade</i>			
more than 20	58%	51%	59%
none	47%	31%	39%

The data on trade, nevertheless, are not conclusive about this, but show how the influence of the geographical factor is constant and significant. We are led naturally to try a combination of these two determinants of feudal interaction, and to assume that this combination will explain more than each of its elements by itself. We combine them according to Table 14 and the results are indicated in Table 15.

It is remarkable that, for the two variables of communication, the effect of this combined index grows progressively as the total score diminishes, which gives us a "J"-shaped curve.

We can now draw a conclusion on this point. The second condition of a feudal system is present, or in other words, the interactions in this system are dependent on rank position, in such a way that the interactions will be more intense the higher the total rank and the lower the rank inequality. Another fact demonstrated by our data is that the interactions are dependent on the relative geographical position of the countries. And the combination of these two factors led us to a new proposition which is partly confirmed in our data: *in an international system of a feudal type the interactions will be determined more by geography the lower the position of the units in the system of stratification.*

7. An open system?

So far we have been dealing with Latin America as a system in itself. We did so when we ordered rank dimensions according to rank position in Latin America, when we used the total amount of trade in the system to construct our measure of relative trade, and so on. This is because the twenty republics are a set of countries very well characterized as a specific sub-system, for geographical, historical and cultural reasons, and must be studied as such. But it is evident that this system is related to other countries and systems. Tables 6 and 7 present some data about air interactions and trade with countries outside the Latin American system, and we must examine these data closer.

Regarding flights, it is striking that all the Latin American countries have direct flights with the United States, only 13 with Europe, 5 with Africa and 4 with Asia. Moreover, all the "high class" countries are included among the 13 which have flights with Europe, and they have 74 percent of these flights. And when we calculate the ratio between flights with the United

States and with other continents, the correlation between the countries ordered according to this ratio and to the international stratification is -0.81 , showing that the lower the position in the stratification system, the higher the concentration of flights with the United States. It is not surprising, then, that this concentration of flights to the United States is also correlated with the indicators of development.

TABLE 14. *Flights with the U.S.A. and indicators of development-correlations*

Indicators:	Correlations
illiteracy	.62
per capita income	-.52
newspapers by inhabitants	-.57
population in industries by active population	-.62

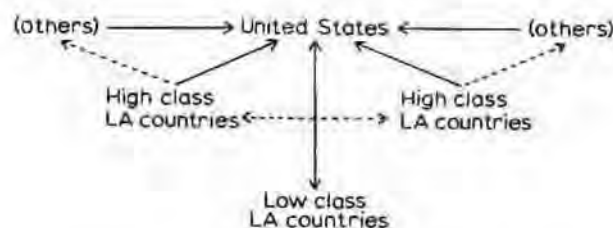
In short: the less literate, the poorer, and the less industrialized, with fewer media of internal communications, a country is, the more it will tend to concentrate its external interaction with the United States.

Regarding trade, table 11 shows the general fact that 45 percent of all the Latin American external trade is concentrated in the United States, and only 12.1 percent with all the other Latin American countries. In contrast, United States trade with all twenty Latin American republics is less than 19 percent of all the external trade of that country.

This concentration of external trade with the United States does not apparently depend on the position in the system of stratification, the correlation coefficient between these two dimensions being approximately 0. But this dependence might perhaps be clearer if we dealt with the characteristics of the export products, the relative importance of the external trade for the economy of the country, etc. However, this would demand a special study.

The Latin American system is an open system, then, to the United States, and relatively closed to other countries. And if the trend regarding flights is more general, we can say that this exclusive openness to the United States is a major characteristic of the countries of low rank. If we considered the United States as a member of the system, the resultant image would be that

of a relatively closed system open to the external world only through the countries of higher rank. A simplified and exaggerated scheme of this is shown below.



But this is not all. There are many reasons for thinking that the international systems of nations also follow the feudal pattern. If this is so, we will have a kind of system of Chinese boxes, with one level of feudalism superimposed on the other, and the effect of this pattern, if it is confirmed by further data, has yet to be analysed.

8. Conclusion

We have analysed the Latin American countries as a system of actors, by means of structural variables which define the position of the countries in a system of stratification and interaction, measured by some simple items. From this analysis follows an image of Latin America as a clearly stratified international system, with patterns of interaction dependent on the stratification, in agreement with our definition of a "feudal system". We have seen how this system depends on geographical contingencies. We have also found that there is a feudal type relationship with the United States that is stronger the lower the rank of the country.

One indication of the extent to which this pattern results in the isolationism pointed out in the Introduction is found by examining how stratification is related to political instability. We used an index constructed by Mr. Walter Soderlund of the University of Michigan. On the basis of studies of the history of the last 30 years of each Latin American country, the index was constructed by adding the years of military or civilian dictatorship and the occurrence or not of successful insurgence, by year and by country. The

rank correlation between this index and our subjective measure of stratification is 0.52. This can be understood in the sense that political stability is a prestige factor, but can also be considered as an indication that the possibilities of conflict and instability are higher in the low-class countries because of their characteristics of under-development as well as by their position in a system of a feudal type.

Our conclusions then are rather pessimistic. The system of feudal interactions is an obstacle to co-operation and development, and consequently a continuous threat to peace. Moreover, this system is self-reinforcing, which means that we may expect its aggravation and an increase in the potentialities of conflict. Only as a perspective, nevertheless, we can suggest that the changes in the patterns of interaction must be improved mainly in those areas where the resources of modern technology give the countries more independence regarding geographical location and volume of resources. Air communications is an example of this, as well as other kinds of scientific and technological activities that are international by nature. We can hope that the improvement of these kinds of activities will improve the intensity of interactions in other areas as well.

Although very general and by no means surprising, our analysis is a very necessary first step in the understanding of this particular international system. The fact that we arrived at outcomes more or less well known indicates that we are on the right path. The difference between our point of departure and our terminal point is that our image of Latin America is no longer intuitive and diffuse, but an explicit and verifiable scheme from which the characteristics of the system can be deduced and tested empirically. It is important, in this first step, that the results reconstruct the diffuse image already existing. But many things now follow less from the idiosyncratic characteristics of each country and more from the structural characteristics of the system. We hope that the expansion of this line of analysis, by the use of more extensive and reliable indicators, as well as the examination of the more refined hypotheses that follow from a structural approach (regarding rank congruency, rank equilibria, criss-cross, etc.) may give us a less intuitive image of this and other international systems, and at the same time more possibilities for explanation and prediction.